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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

AMINI, JAVID A

ART UNIT	PAPER NUMBER
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2628

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	01/30/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/30/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

09/944,598

Applicant(s)

SATO ET AL.

Examiner

Javid A. Amini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/29/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-8 and 17-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments filed 11/29/2006 have been fully considered but they are not persuasive.

Applicant on page 3 argues that claims 6-8 and 7-26 are directed to statutory subject matter.

Examiner's reply: the rejection claims 6-8 and 7-26 under 35 U.S.C. 101 has been withdrawn.

Applicant on pages 4-5 under prior art rejection argues about Examiner's official notice. Applicant submits that these features are not commonly known as related to multidimensional LUT in the manner claimed by applicants, because at the time of the invention such featured claims were not known. Applicant emphasizes a priority date going back to October 8, 1998. Applicant requests to produce evidence that discloses such knowledge is known prior to the invention of the present application.

Examiner's reply: Examiner submits the following prior arts to show that those features are commonly known as related to compressed multidimensional LUT and the identifier:

1. US-PAT-NO: 5583656, Gandhi et al. date filed Dec. 31, 1992 in fig. 1 unit 104 illustrates methods and apparatus for attaching compressed look-up table (LUT) representations of N to M-dimensional transforms to image data and for processing image data utilizing the attached compressed LUTs.
2. US-PAT-NO: 5724442, Ogatsu et al. date filed April 19, 1995 in fig. 7 unit 39 illustrates those features as related to multidimensional LUT.
3. US-PAT-NO: 5930387, Chan et al. date filed: Dec. 04, 1997 in fig. 3b illustrates the compression mask LUT .
4. US-PAT-NO: 5905502, Deering, date filed Oct. 16, 1997 in fig. 1 illustrates the decompression look-up table associated with the three-dimensional geometry compression unit 130.
5. US-PAT-NO: 5748342, Usami, date filed Apr. 14, 1995 in figs. 5 and 15 illustrates multi-dimensional LUT contain color space compression, see fig. 21 step S31.

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6. US-PAT-NO: 6118116, Sawada et al. date filed: August 19, 1998 in fig. 2 units 5C and 10A illustrates those features as related to multidimensional LUT.
7. US-PAT-NO: 5721791, Maeda et al. date filed Sep. 23, 1994, in fig. 45 illustrates a multidimensional LUT, and in fig. 52 unit 912.
8. US-PAT-NO: 6036650, Wu et al. date filed: Sep. 15, 1998 in fig. 9 comp. LUT 276 illustrates those features as related to multidimensional LUT.
9. US-PAT-NO: 5537551, Denenberg et al. date filed: Nov. 18, 1992 teaches at col. 32 lines 9-18 those features as related to multidimensional LUT.
10. US-PAT-NO: 5489998, Yamada et al. date filled Jan. 23, 1995 in fig. 5 illustrates when the color correction value calculation mode is set by the switch 18, signals Y.sub.4, Cr.sub.4 and Cb.sub.4 of a color patch, serving as a standard image, output from the look-up table 19 are compressed by an image compression unit 203.
11. US-PAT-NO: 5300931, Lindsay et al. date filled Sep. 4, 1987 in fig. 8 illustrates those features as related to multidimensional LUT.

Examiner's note: the term "identifier" used in claimed invention is similar to a compression ratio.

Examiner encourages Applicant to schedule an interview.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-8 and 17-26 rejected under 35 U.S.C. 103(a) as being unpatentable over

Bhattacharjya, US Patent number 5,809,213.

1. Claim 6.

A lookup table which is composed of color characteristic data which are indicating the relationship between supplied image data and output image data (col. 5, lines 43-50, a lookup table is generated from "augmented sample points" which correspond to "color characteristic

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data") which are determined to be impossible to be interpolated when a process for converting image data is performed (fig. 2a, col. 10, lines 40-63; points are sampled because many points are impossible to interpolate); similarly some points are non-linearly interpolated because they are impossible to linearly interpolate; and image data converting means for converting supplied image data by using said lookup table composed of the characteristic points into output image data (col. 5, lines 43-50; a linear interpolation function is used to convert the table value to a calibration values for a color reproduction system). Bhattacharjya discloses a transformed signals R' , G' , B' are subsequently provided to a three-dimensional lookup table formed in conjunction with figs. 2-6 and the final output signals R , G , B , are provided to printer 128, see col. 15, lines 34-38.

Bhattacharjya does not disclose a multidimensional lookup table is a compressed multidimensional lookup table formed by compressing the multidimensional lookup table and an identifier for identifying a restoring method; nor does Bhattacharjya disclose restoring means provided which restores the compressed multidimensional lookup table into the multidimensional lookup table.

However, Official notice has been taken of the fact that compressing and restoring a color table is well known in the art (see MPEP 2144.03). It would have been obvious to one skilled in the art to modify Bhattacharjya to compress and restore a color table in order to conserve space in memory also may add an identifier for identifying compressing/decompressing method into the LUT.

2. As to claims 7, 8, 17 see rejection of claim 6.

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3. As to claims 18-19, claims 18-19 contain color characteristics of a digital camera. The prior arts do not disclose a digital camera. However, it would have been obvious to a person skill in the art to modify Bhattacharjya to be able to identify the target device, e.g., PC, PDA, printer and etc.

4. As to claims 20-21, claim 20 claims the step of the color characteristic data is synthesized with image data that is obvious to a person skill in the art. Claim 21 claims the identifier identifies a repairing method, Bhattacharjya at col. 5 lines 66-67 teaches the claim limitation.

5. Claims 22-26

See rejection of claim 6 and 7, which applies to claims 22. Applicant in claims 23-26 claims that color intensity data is included of Red, Green and Blue color data. It would have been obvious to a person skill in the art to recognize the color intensity includes RGB. Bhattacharjya illustrates the claim limitations in fig. 6.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A. Amini whose telephone number is 571-272-7654. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Javid A Amini
Examiner
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J.A.



KEE M. TUNG
SUPERVISORY PATENT EXAMINER